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ABSTRACT

A structure for the accreditation of Britain's third Youth Training Scheme outcome, ability to transfer, must be developed immediately. By all indications, the outcome cannot be graded in a way that matches the levels proposed for the National Vocational Qualification structure. Instead, ability to transfer should be seen as a component of occupational competence. It can be achieved in ways that are sufficient or insufficient for individual jobs or movement between jobs. Different types of ability to transfer can be identified. They can be used as a framework for reporting a range of performances, in conjunction with categories of information used to verify that trainees were, in fact, using their ability to transfer. The framework is to be developed in the Work Based Learning Project at the Further Education Staff College, primarily as a means of investigating work-based learning strategies and their effectiveness. (YLB)

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Coombe Lodge
WORKING PAPER

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THE ACCREDITATION OF "ABILITY TO TRANSFER SKILLS AND KNOWLEDGE TO NEW SITUATIONS"

a paper for discussion by
The Youth Certification Board

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THE ACCREDITATION OF 'ABILITY TO TRANSFER SKILLS AND KNOWLEDGE TO NEW SITUATIONS'

A PAPER FOR DISCUSSION BY
THE YOUTH CERTIFICATION BOARD

written by
David Mathews
The Further Education Staff College
July 1986

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Introduction - the YTS outcomes

Part 3 of the Certificate contained in the record of achievement for two year YTS is a framework for presenting achievement in the four YTS Outcomes. The outcomes are:

> "1. Competence in a range of Occupational Skills
>
> 2. Competence in a range of Transferable Core Skills
>
> 3. Ability to transfer skills and knowledge to new situations
>
> 4. Personal Effectiveness"

Within the Certificate (in Part 1), Occupational Competence is implicitly defined as the aggregation of "Competence Objectives (or modules) Achieved".

The accompanying guidance for completing the Certificate (and the Record of Achievement as a whole) states that the YTS Outcomes are "four aspects of competence". Training for transfer is particularly commended in terms of young people being "able to transfer their skills to new jobs, new technologies and new situations".

The guidance further indicates that the third outcome

> "...refers to the methods and procedures people use to redeploy their occupational and core skills to new jobs, tasks and situations."

It can be seen from this that the outcomes are intended to be strongly interdependent as well as each being constituents of occupational competence.

Ability to transfer and the National Vocational Qualification

The **Review of Vocational Qualifications** (RVQ) describes and recommends five levels of award for a National Vocational Qualification. The chief characteristic of the levels is they are based on patterns of perceived occupational competence. Indeed, there is in the levels a stronger representation of occupational competence than in the definition of a vocational qualification contained in the same report. Neither case, however, suggests any obstacle in **principle** to the inclusion of YTS achievements somewhere in the framework of qualifications.

The award of a vocational qualification to a YTS trainee needs therefore to relate both to the National Vocational Qualification and to the YTS Outcomes. It does not follow from this, however, that each of the four outcomes then has to have five levels in imitation of the NVQ levels, or indeed any set of levels in parallel to those of the NVQ.

The levels recommended by RVQ are based on several dimensions of occupational competence. The distinction between one level and another involves, variously, range of tasks, difficulty of tasks, degree of supervision, responsibility for others, producing versus designing. In measurement terms, the levels form a nominal scale. That is, they are distinct categories which do not have any absolute order but could be placed in a number of different arrangements, depending on the criteria one chose to apply. The given order seems to be chiefly based on degree of supervision and responsibility for others. It could be argued, however, that it also reflects the kind of order one would get if jobs were rated purely by the educational qualifications of recruits or entrants, rather than by competence attained.

This critique is not gratuitous. It reinforces the argument that 'higher' levels of vocational qualification as defined in RVQ do not necessarily require a greater degree of ability to transfer.

Levels of ability to transfer

The term 'level' tends to be applied to achievement or qualifications in a rather cavalier manner. RVQ may be said to be exceptional in trying to define it. More often it is taken for granted that by level everyone understands the same thing. Most often, perhaps, degree of difficulty or exclusiveness would be the best interpretations of what is intended. Level of achievement could, however, be derived from the variety or applicability of the skills or knowledge acquired.

Take, for example, two modules or programmes. One is to do with the physics of the internal combustion engine, the other involves repairing engines. Whether one assigns a higher level to one or the other depends on the perceived purpose for which the distinction is needed. If we are considering the job of a motor mechanic, the difference in applicability is clear. If we consider engine design, it is less obvious which module is more applicable.

Achievement in different occupations is distinguishable in part by the range of work with which people have to cope, by the extent to which they use skills in different circumstances or bring knowledge to bear on the activities

they carry out. As a component of occupational competence, ability to transfer would seem to be quite as susceptible to levels of variety or applicability as to levels of difficulty.

To summarise the argument thus far. Levels of ability to transfer do not need to form a scale in imitation of the NVQ levels. Neither do they need to be the conventional levels of difficulty.

Transfer and competence

If ability to transfer has value as one of the outcomes of YTS, that value is based firmly in the contribution which it makes to an individual's occupational competence. The same argument applies to all the outcomes. Without worrying about a definition of this 'ability' for the moment, let us examine the general nature of the contribution.

In MSC's guidance on the YTS Certificate, there are various examples of ability to transfer (for a hypothetical trainee). The first describes 'John Smith's' reaction to a second work placement - "...and took initiative in finding out about methods and procedures used". Another relates that the trainee applied skills acquired in college to workplace tasks.

The examples suggest that different instances of transfer may be of a quite different order. A trainee or experienced worker may transfer skill from one task to another, using within a later task skills of communication or number, for example, acquired within an earlier task in the same or a different location. Skills may be acquired off-the-job and then transferred ('applied' as one might say) to the 'real' situation. Some of the skills of one job may be transferred to another - skills to do with individual tasks, to do with the management of those tasks or to do with dealing with the environment or the people associated with the job.

Transfer, as used here, is not some magic or extra-sensory facility to undertake new tasks or jobs unaided. Generally stated it is the phenomenon of learning more easily or more effectively than otherwise in a new situation as a result of the learning which has taken place earlier. Transfer does not therefore have to be seen as simply present or absent. It is demonstrated **to a degree**.

It is also demonstrated as much in the little things of work as in the major events. Much of the transfer which enables us to work and to live the whole of our lives effectively is not dramatic. Transferring skills to a new job (evidenced perhaps by a short training time) is valuable, both for the individual and the employing institution. This, however, is not necessarily more important than the transfer that enables

someone to cope with a change in the tasks they are carrying out each day or with a change of routine or an adjustment in the priorities they have to accord to different aspects of their work. Such undramatic transfer should not be taken for granted. Many of the things which go wrong in a job are failures in transfer between relatively similar activities.

Competence as it is understood day to day incorporates transfer and requires an ability to transfer. It is expected of competent job holders is that they will cope with new tasks without having to start their learning from scratch. The job holders themselves also assume this, though they are often insufficiently aware of their skills and the demands of new activities to achieve transfer effectively. The expectation associated with occupational competence is that someone can, by virtue of their 'experience', realise their potential for a number of related jobs. **In the absence, therefore, of independent 'levels' of ability to transfer, it may well be sufficient to define this outcome as part of the competence requirements of jobs or occupations or, in the present case, levels of qualification based on different categories of occupational competence.**

The remainder of this discussion paper deals with two questions which now arise:

1. For what purposes should this attribute be accredited, and how might purpose affect the nature of certification?

2. In what way(s) can differences in ability to transfer be described?

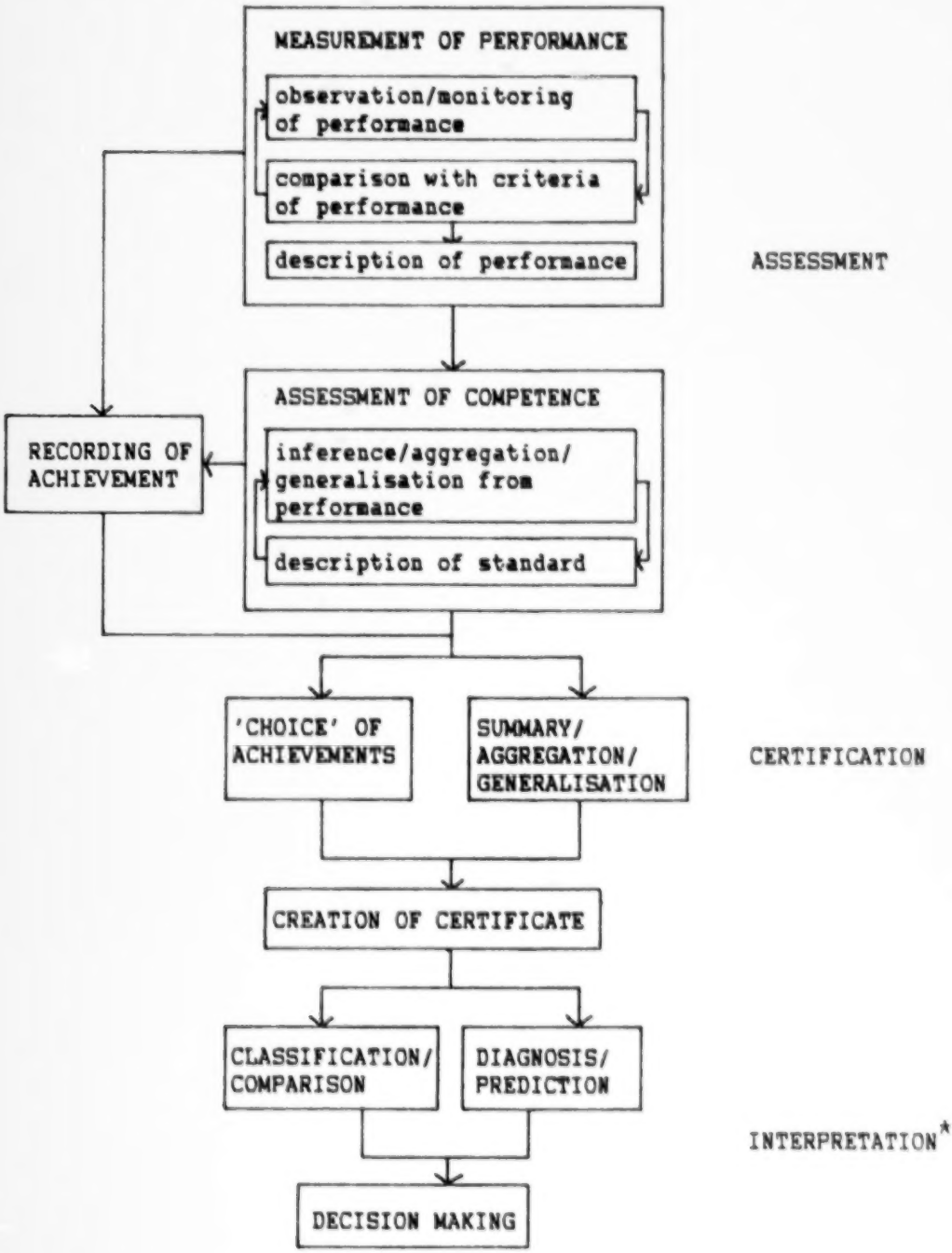
The nature of accreditation

Accreditation of the ability to transfer is but one component in the accreditation of work based learning as it is developing within YTS and, it is to be hoped, outside YTS. Accreditation is, of course, much more than certification. It would be recognised (as a principle at least) by examining and validating bodies that qualifications or certificates which were not valued by other than the awarding authorities would turn out to serve little purpose. For any new qualification (within NVQ, for example) we should ask the question, "And when everyone has one, what then do we expect to be done with these qualifications?"

Accreditation can be thought of as having three principle components: assessment, certification and interpretation. Figure 1 shows one view of how these components relate to each other.

Figure 1

INTERRELATED PROCESSES OF ACCREDITATION



Note *. For purposes of selection, guidance, evaluation, trainee reward, scheme status

Certificates are interpreted by a variety of people for a range of purposes. Trainees may be interested in them. So may careers counsellors, course tutors, trainers and selectors, including admissions tutors and personnel officers. The outcomes of the certification process may provide reward, data for evaluating the programme, evidence for a counsellor or a selector. There is a well-worn argument that educational qualifications (particularly those obtained usually within secondary education) fail to address enough of these purposes. The relationship of YTS to both the New Training Initiative and the Review of Vocational Qualifications, however, demands certification which assists progression in all parts of the vocational education and training system.

A wish to accredit ability to transfer implies that knowledge of this attribute assists the purposes of accreditation. Inclusion of the ability to transfer in a certificate (or in a qualification) must be based on its potential for influencing counselling or selection procedures, enabling the evaluation of YTS programmes or providing a deferred reward to trainees. Of these purposes, selection for jobs, further training or education may be the most critical. There is a need to present information which does not cause selectors to under-estimate or over-estimate a trainee's ability to transfer in the particular job or training opportunity. Under-estimation may arise where ability to transfer is seen as applying only in very limited ways. Over-estimation may result from generalising too much from specific instances.

The biggest culprits in generalising too much are not selectors (or other interpreters), but those who complete certificates. The need or desire to report achievement in a compact form seems to encourage a rush to judgment on the basis of too narrow a spread of information. Where, as in the case of the ability to transfer, there is no well established understanding of an attribute, it is probably best to give more rather than less information and allow those interpreting the certificate to decide what its implications are for their own requirements.

There is a particular danger of over-generalising with this outcome of YTS. It derives partly from the phrase used to describe it. The use of the term 'ability' encourages the belief that this is a single dimension of achievement. If we include within 'ability to transfer' all the transfer from task to task, off-the-job to on-the-job, placement to placement and job to job then it is not possible to justify a unidimensional interpretation. If there was nonetheless an insistance on ability to transfer being regarded in this simplistic way, the existing measure it would most resemble is general intelligence. This is a construct which has some usefulness in statistical terms, but as a determinant of

occupational potential it is too gross a measure. Moreover, the adoption by MSC and a National Council for Vocational Qualifications of a neo-IQ as part of a system of qualifications would prompt, we might say, interesting reactions.

And yet, because there are different aspects of ability to transfer, these should form part of vocational and educational decision making. Even though the attribute is not an ability in the true sense at all, its value as a YTS outcome lies in its relevance to a trainee's future.

Differences in ability to transfer

This comes back, then, to the second of the questions raised above - **in what way(s)** can differences in ability to transfer be described? Independent levels have been ruled out - the ability to transfer is more complex a construct than can be summed up in a single dimension, let alone a simple grade or classification.

In order, therefore, not to choose arbitrarily one aspect of the ability, any reporting or certification should cover a range of different types of transfer and trainees' success in dealing with these.

A framework will be proposed, therefore, for distinguishing different types of ability to transfer. In addition, guidelines for presenting evidence of ability to transfer will be suggested.

The discussion which follows takes into account a variety of research findings. It must be said, however, that despite a good deal of research into transfer in a wide range of activities (as outlined, for example, in a report to MSC[1]), too little attention has been paid to how transfer may vary systematically according to the nature of the activities.

The occupational scope of ability to transfer

One way of viewing ability to transfer is as a qualifier of any achievement. The ability to transfer an acquired skill is, as already argued, one measure of 'level' of achievement of that skill - similar to degree of applicability. A possible categorisation of ability to transfer as a component of occupational competence might look as follows:

insufficient within the job (placement)
sufficient within the job
sufficent for the occupational area
sufficient beyond the occupational area

This is **not** a scale for rating trainees' performance, but one way of describing the **scope** of ability to transfer. In

reality, of course, the categories are a gross oversimplification. Many trainees will demonstrate ability to transfer which is on the one hand insufficient for the job, while containing elements which extend beyond the job, perhaps as far as another occupational area. Moreover, the transfer which is sufficient within the job may involve cognitive processes no different from the transfer needed across the occupational area.

The categories may be useful to scheme designers and, particularly, for the interpretation of a trainee's certificate or record of achievement. The judgment as to whether a trainee is likely to be competent in another situation should always be the **responsibility** of the selector. The job of the certificate awarding organisation is to report evidence and, where possible, to generalise from that evidence to some assessment of competence which is capable of being interpreted by a range of users, including the trainee.

Components of job competence

It has already been argued that ability to transfer needs to be seen in the light of its contribution to occupational competence. As one of the four outcomes it is a component of occupational competence.

Competence in the awards at levels 1 and 2 in the National Vocational Qualification proposed by the Review of Vocational Qualifications are seen as being to do with performing tasks under different degrees of supervision. For recognising the skills which people use in jobs, this characterisation of the levels has certain limitations. In particular, the reference to the award holder's 'being supervised' masks any recognition of the degree to which responsibility is being taken within competent performance.

A description of job competence which might correct this imbalance is that offered in a leaflet on issues of work based learning from the Core Skills Project[2]:

"The skills involved in carrying out tasks and those processes that surround the tasks suggest that job competence has three inter-related components. These are to do with :

tasks

task management

the role/job environment

"**The tasks component** requires skills that are used in a routine way in tasks which have a definite outcome. (For example, collating a report; typing a batch of correspondence.)

"**The task management component** involves skills which are used, for instance, when there are a number of tasks to do or where the tasks require additional activities. (For example, planning an efficient work sequence for a series of tasks; checking on paper availability in the photocopier.) Where a job includes responsibilities which may intrude on routine tasks (for example, being responsible for monitoring the office stock cupboard), or when problems and difficulties occur, skills of the task management component are critical to competent performance of the job.

"**The role/job environment component** includes skills of working directly with other workers and of working with people from outside the workplace, particularly customers, clients and members of the public. They are also used in responding appropriately to high criticality in terms of cost, value or safety of others, and in working in environments with known health and safety hazards."

It should not be assumed that YTS trainees are competent only at level 1 in National Vocational Qualification terms, but even at this level jobs entail using task management skills and the skills of dealing with the role/job environment. It follows, therefore, that trainees may demonstrate the ability to transfer not just in well-defined and limited tasks, but throughout the job.

Task skills, task management skills and skills of dealing with the role/job environment form one dimension of the proposed framework for ability to transfer. It is an important dimension because it indicates the different types of change which trainees may experience and which may call on their ability to transfer - change of tasks, changes in job structure, changes in the job environment.

It is rather obvious to say that **task skills** may be transferred from one task to another. The 'new' task may be within the same placement or in another. Within a placement, it may be at the same workstation or at another. A 'new' task may, indeed, have the same outcome, but involve a change of method or approach entailing some, but not all, of the previously used skills.

Task management skills may be transferred when there are changes in task management requirements. This may or may not involve a change of tasks. These skills may be transferred from one placement to another, or may need to be transferred within a placement if the workstation changes. More subtle changes demanding transfer of task management skills include changes in priorities or responsibilities for the work, changes in workload and changes in the level and type of guidance or instruction given.

Skills of dealing with the **role/job environment** may, similarly, be transferred whenever the trainee experiences a different environment. This may not require a change of placement, but may occur when a trainee has to deal with different people in the same workplace, has to take account of new health and safety hazards or with goods or products or services of very different value from before.

Near and far transfer

The response of trainers, supervisors, trainees to some of the less dramatic changes may be to discount their significance. Particularly within the carrying out of a job, however, transfer of skills in this way is far more common than in the ways demanded by adjustment to major change. It is also a constant source of mistakes and frustration when carried out less than fully effectively.

The similarity of one activity to another is, intuitively, an important factor in the process of skill transfer. The problem is that intuition does not take one very far in understanding the relationship between similarity and the degree of transfer to be expected. There are two complications.

The first is that 'similarity' is hard to specify. Two tasks or activities may relate in some respects, but not others. Which are the important characteristics for predicting positive transfer? Apparent similarity may conceal differences in the most critical aspect of a task; the promise of transfer may not be realised.

The second complication is that there is some evidence of different processes applying to 'near' and 'far' transfer. Near transfer may, moreover, be more characteristic of procedural learning, using accumulated skills from past

experience with similar tasks. Far transfer may be enabled by the acquisition of concepts and principles with formal properties, flexibly applied to novel activities. The implication is that different **styles** or **types** of ability to transfer are involved in these different circumstances. Certainly the evidence suggests that far transfer does not depend simply on **more** ability to transfer than near transfer. A measure of ability to transfer cannot be obtained by seeing how 'far' a trainee can transfer a skill! (For further discussion of this aspect of transfer see, for example, papers by Clark and Voogel[3] and Mathews[4].)

As a way of dealing with the undoubted uncertainty, it is proposed that the framework includes near transfer/far transfer as a dimension. In view of the difficulty of determining 'nearness' or 'similarity', the intuitive judgment of similarity should be checked to see if the transfer involves common procedures. There should be no significant common procedures where far transfer is claimed, more a linking by common concepts or principles.

Familiar - unfamiliar

'Unfamiliarity' tends to be used in the context of transfer as though it were a polar opposite to similarity. Unfamiliarity is certainly a term relevant to transfer, and trainees' response to it demands the use of different facets of the ability to transfer. It is, however, a subjective, trainee-specific concept of quite a different order from similarity which is based on formal or procedural relationships between activities.

A trainee's ability to cope with the unfamiliar has become associated since the publication of **Training for Skill Ownership**[5] with skills of finding out. If these skills enable a worker to cope more quickly or effectively in the situation, then transfer can be said to have taken place. The transfer is partly of skills of 'finding out', and partly of the task, task management or role/job environment skills subsequently deployed.

Embedded or generalised skills

In some cases of transfer, a set of skills or competence in a specific task is reapplied almost unchanged as a component of a larger activity. This is known as transfer by 'embedding'. In other cases performance of a new activity demands a revised application of a principle, a [illegible] of an earlier learned pattern of skills. This is transfer by 'generalising'. Again, it would be inappropriate to lump the two types of transfer together and assume that the same ability to transfer applied to both.

Specific experience versus rule learning as a source of transferred skill

Some transfer at least seems to take place via the process of generalisation or adaptation from particular instances with reapplication or redeployment in the new context. Much education and a good deal of formal on and off-the-job training attempts to short cut this hypothetical process by 'teaching' the general. Transfer from learning general rules or principles may be a very different problem from transfer based on one or more specific activities. Whether either is easier or preferred by the learner is not important here.

The framework includes a distinction between **sources** of the 'transferred' learning - specific experience or general rule learning.

Transferable Core Skills

The second (according to convention) YTS outcome is entitled "Competence in a range of Transferable Core Skills". Four of the Core Areas (the fifth being Computer and Information Technology) are made up of skills defined in **Core Skills in YTS: Part 1** as:

> "Those skills which are common in a wide range of tasks and essential for competence in those tasks."

The areas cover number, communication, problem solving and practical skills.

The MSC core skills represent skills in these four areas which competent workers perform in carrying out their jobs. The development of the core skills includes an aim of **enhancing** trainees' skill acquisition and transfer. This is achieved in part by helping trainees become aware of their skills and their potential use in new activities. In the same way that transfer (as discussed above) occurs partially, so the performance by a trainee of a core skill in one activity or context does not **guarantee** its transfer to some other activity or context. The core skills do, however, represent **opportunities** for transfer. Properly recognised, they can provide trainees with a head start in a new activity. With a wide enough scan of a trainee's performance, they can provide an assessment of achievement in a language which is not limited by the occupational boundaries which might otherwise be thought to apply.

The analysis of core skills in activities is known as core analysis. Its use in various forms by trainers and trainees helps to identify the opportunities for transfer and gives trainees feedback on their skill development. Core analysis

can be used to examine, in a specific context but in a cross-occupational language, the skills used in tasks, task management and in dealing with the role/job environment.

The core skills - and the process of core analysis - may not be capable of identifying all possibilities of skill transfer. But a very large part of the skill transfer which is believed to take place can be described in core skill terms, if not attributed to the core skills themselves. This has two implications. One has to do with making claims that a trainee has transferred skills. This is discussed in a later section. The other has to do with the complexity of ability to transfer.

The range of the 103 core skills is considerable. It is not known from empirical evidence whether mechanisms of transfer, and therefore the ability to transfer apply equally across this range. A further dimension of the framework, therefore, should be that of the core skills involved in the reported instances of transfer. The main purpose of this would be to ensure that accreditation of a trainee's ability to transfer were not based on too narrow a range of skills transferred.

The framework as a whole

The different dimensions or aspects of the framework are not completely independent of each other. In particular, the role of cognitive processes of generalisation appears in different guises in several of the dimensions. All the dimensions, however, represent ways in which ability to transfer can vary within the individual - ways which suggest that it is not a unidimensional attribute. (Even if it were, we would still need to sample across these kinds of differences.)

One response to the variations which the dimensions identify would be to require that accreditation of the ability to transfer cover all possible combinations - a set of some hundreds of different types of transfer. This is not reasonable. **An alternative is to require or recommend that evidence of the ability to transfer should include instances covering some range on each dimension, but not in all possible combinations.** Even though there would need to be coverage of, for example, near transfer as well as far, or of the transfer of task management skills and role/job environment skills as well as task skills, some different types of transfer could be evidenced by the same event.

The selected dimensions of transfer to which ability to transfer must be addressed are shown in Figure 2.

Figure 2

DIMENSIONS OF TRANSFER TO WHICH ABILITY TO TRANSFER APPLIES

TRANSFER OF:	**task** skills **task management** skills **role/job environment** skills
FROM:	performance of a **specific** activity learning a general **rule**
INCLUDING:	**number** core skills **communication** core skills **problem solving** core skills **practical** core skills
IN A PROCESS OF:	**near**/procedural transfer **far**/formal transfer
ACHIEVED BY:	**embedding** skills redeploying **generalised** skills
IN ACTIVITY SEEN AS:	**familiar** **unfamiliar**

The framework does not include a dimension of learning or transfer 'location' - workplace, on-the-job training or off-the-job training, though it could be added. Wherever possible, transfer should be identified in the work of the learner. This is, generally, most easily seen in the workplace in the course of a trainee's work experience. The activity to which transfer is considered to have taken place should, therefore, be part of that work experience wherever possible. Locations of the **source** of the skills transferred should be noted, but are less critical for identifying the type of transfer than the dimensions listed in Figure 2.

The figure does not show the relationship between these dimensions and the categories of occupational competence introduced as a possible way of interpreting the scope of ability to transfer. This is because, as suggested above, the question of whether ability to transfer is seen as sufficient for a job or for more than a job is a matter for **interpretation**.

Similarly, a standard relationship cannot exist between the dimensions of ability to transfer and the levels of the National Vocational Qualification. A trainee's achievement can be examined for both NVQ level and ability to transfer, but ability to transfer cannot be predicted from NVQ level, nor level from ability to transfer.

Requirements for reporting

The accreditation (or inclusion in accreditation) of ability to transfer makes some unusual requirements on the accrediting body and its evidence gatherers. The dimensions of ability to transfer introduced above indicate that a sound interpretation of a trainee's ability to transfer needs to be based on a wide variety of performances. There is nothing unique about the third YTS outcome in this respect.

The problem peculiar to ability to transfer lies in the recognition of its occurence. When it comes to measuring performance in an occupational skill, for example, against given criteria, there may be some unreliability in the measurement or observation, but there is little risk that some completely different event is actually taking place. Further, when core skills are being recorded, their occurence may have to be inferred through core analysis of activities, but the errors here are likely to be limited. A claim that ability to transfer has been demonstrated during learning, in contrast, could be totally wrong. Too many factors are involved in a trainee's performance for ability to transfer to be inferred automatically.

There needs to be some justification for the claim that transfer has been detected. A record of the transferable core skills involved in the transfer, for example, could form part of a justification. The use of the same core skills in two activities is not **proof** of transfer having occured, but it does enhance the claim.

Even the occurence of transfer, however, does not necessarily mean that the instance is a good one for measuring ability to transfer. The degree to which transfer takes place is also influenced by motivation, expectations, a trainer's intervention and a range of pressures in the working environment.

Much of this paper so far has been devoted to reasons why it is difficult to generalise about ability to transfer. The early paragraphs in this section point to the basic problem of knowing when it is available to be measured. What makes accreditation of this YTS outcome so important despite these conceptual and practical difficulties is **usefulness** rather than ease of assessment. With the core skills and personal effectiveness ability to transfer is orientated to predicting future performance when change is involved. The change may consist of the routine variations required within a job, more major technical or organisational development, a move to another job or entry into further or higher education.

In view of the undoubted difficulties, therefore, there is a need for guidelines on measuring, assessing and reporting trainees' ability to transfer.

For any activity offered as evidence of a trainee's ability to transfer, there should be three categories of essential information. This is in addition to a full description of the contexts in which performance was observed. The categories are:

1. transfer conditions applying to the performance;

2. indications that ability to transfer was demonstrated;

3. contra-indications, suggesting that ability to transfer was not as significant as it might otherwise appear.

Transfer conditions

The general condition which should apply to any performance offered as evidence of the ability to transfer is that there is a **prima face** case for transfer having occured. This could be satisfied as follows:

1. there should be an identified activity or set of activities from which transfer has taken place;

2. the core skills common to reported activities and earlier learning should be specified;

3. the transfer should be described in terms of the dimensions shown in Figure 2;

4. primary effects of positive transfer should be detectable - learning to perform the activity is more effective than would have been the case without the earlier learning.

The last condition reflects the nature of transfer. It is a saving of training time or training effort or achievement of a more effective performance as a result of previous learning.

Transfer, as has been stressed above, is a matter of degree. Some instances of transfer may be impressive in their effectiveness, just as they may be dramatic in the unfamiliarity of the situation in which they apply. Others may be less striking, but may be quite as worthwhile if they represent a day to day competence in dealing with variations in the conditions or practices of work.

Indications of ability to transfer

If performance or learning of an activity is to provide useful evidence about this YTS outcome, ability to transfer must be **distinct** in its influence. The following are possible indications which support this:

1. a trainee may refer to the similarity between an activity and one previously encountered or even say that he/she found the activity easy because of what he/she had experienced before;

2. trainees may claim that they have previously acquired skills used within the activity;

3. trainees may display other behaviours which indicate the application of earlier learning to the activity - they may, for example, ask appropriate questions, look up relevant information, say they do not need further help, or carry out correct actions without the need of instruction.

Contra-indications

When transfer genuinely occurs, ability to transfer is being exercised. The problem lies in ensuring that any **apparent** transfer is the result primarily of the trainee's earlier learning, and is not the outcome of a supervisor's actions or some special circumstance. When, for example, a trainee appears to learn a new task more quickly than usual, it is important to check for factors other than ability to transfer.

Some of these lie with the trainees themselves. For example, a new task or working environment may be much more interesting or motivating for a trainee. His/her learning may, as a consequence, be much more rapid than expected from previous performance. Ability to transfer need not have any influence.

There may also be indications that ability to transfer is not the significant factor in the actions of a trainer, tutor or supervisor. An supervisor, for example, could be aware of the commonality between a new activity and a previous one. Instructions might be given which stress the connection, and direct the trainee to adopt a procedure similar to that in the earlier case. The result is that the new learning has the air of transfer about it, but the trainee has not exercised the ability to transfer. (This type of event may, nevertheless, be useful for introducing a trainee to the **idea** of transfer.)

The circumstances of learning may cause the appearance of transfer, without providing a demonstration of the trainee's ability to transfer. A new activity may be carried out under different pressures, and a trainee may respond positively. These pressures may be to do with time, the value of equipment, safety hazards, degree of supervision and many others. Most straightfoward of all, a task may be easier than was thought.

Measurement and assessment processes

In Figure 1 a distinction is made between the measurement of performance and the assessment or recognition of competence. It is a distinction which applies to all assessment and therefore to assessment of the four YTS outcomes. Isolated instances of skills being exercised do not constitute an assessment of competence. Such instances may contribute to an assessment, but are not, individually, sufficient bases for generalising about achievement or competence.

The process of generalising is the most common link between the measurement of performances and the assessment of competence. When qualifications are designed to enable progresion, the purpose of such generalising is to enable predictions to be made about the future performances of the trainee from a balanced consideration of past performances. The particular predictions which are subsequently made are the subject of the interpretation phase of the accreditation process.

For any component of a qualification, the processes of measuring performance and of assessing competence both need to be specified. Some of the complexity of ability to transfer has already been described, and suggestions have been made as to the constraints on acceptable information. In what way, now, should the information be obtained?

The framework of transfer outlined in Figure 2 suggests that any programme of purpose built tests would have to be a considerable one. Moreover, the use of tests, with all their resource implications should not be decided for one outcome in isolation. 'Ability to transfer tests' would, therefore, not seem an immediate solution.

It is not clear, in any case, that they would be a preferred mode of obtaining information. Tests of any ability or achievement sacrifice a good deal of realism in order that the information obtained be neat and tidy. Ability to transfer is particularly vulnerable to this syndrome. One of the key features of transfer is the adaptation to the particular circumstances of the new situation. Even so, the pressures and vagaries of naturally occurring work situations

can confound inference about ability to transfer. Tests, however, would create artificial conditions but without much likelihood of isolating ability to transfer from all influences such as those described above.

Individual instances of trainees using their ability to transfer need, therefore, to be identified in the three elements of work based learning - planned learning in the workplace, on-the-job learning/training and off-the-job learning/training. Among these elements it is the learning in the workplace which is most promising for identifying ability to transfer as part of occupational competence. It can include changes in tasks and placements and opportunities to transfer to 'real' work skills learned in on and off-th-job training. The identification and description of trainees' performances will require consultation between supervisors, tutors, trainees and whoever coordinates the reporting procedure. But this will be easier given a framework and guidelines such as those discussed above.

It may not be possible to provide general assessments of ability to transfer. The capacity to generalise even about a single type of transfer will depend very much on the consistency of evidence emerging about any individual. Certification will therefore consist of full and structured reports of performances which provide verified evidence of ability to transfer. The performances should range across the various types of transfer which have been described. The process of deciding what the performances imply in aggregate devolves to the **interpreters** of certificates.

Interpretation - briefly

While it is part of the accreditation process, interpretation of individual certificates is not the responsibility of the certificate awarding bodies. There is, however, a responsibility to anticipate the needs of interpretation.

The most critical uses of certification or qualifications are to do with progression and with the various selection processes which control its various forms. Ability to transfer is potentially important to selection processes for two reasons.

Firstly, ability to transfer is a component of occupational competence. Achievement can therefore be related to the demands of a particular job, training or vocational education opportunity, and may be seen as sufficient or insufficient for these. Secondly, ability to transfer may give some indication of a trainees' potential to change to an area of employment, training or education different from the one(s) in which he/she was trained.

In both these cases the interpretation of a trainee's performance is in relation to specific opportunities. Interpreters need a full description of the circumstances and nature of performance. A general summary, even if it could be drawn up, would be too coarse to be much use. If selectors and counsellors are to be able to interpret detailed evidence, however, it cannot be presented in an idiosyncratic manner. While all certificates cannot report on the same events, they can have a common structure for ability to transfer. A basis for that structure is offered in this paper.

Summary and conclusion

There is a need to develop immediately a structure for the accreditation of ability to transfer, the third YTS outcome. There is no indication that the outcome can be graded in a way which matches the levels proposed for the National Vocational Qualification structure. Instead, ability to transfer should be seen as a component of occupational competence. It can be achieved in ways which are sufficient or insufficient for individual jobs or movement between jobs.

Different types of ability to transfer can be identified. They can be used as a framework for reporting a range of performances, in conjunction with categories of information used to verify that trainees were in fact using their ability to transfer.

The framework is to be developed in the Work Based Learning Project based at the Further Education Staff College, primarily as a means of investigating work based learning strategies and their effectiveness.

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